Complete Summary

GUIDELINE TITLE

Comprehensive adult medical eye evaluation.

BIBLIOGRAPHIC SOURCE(S)

Preferred Practice Patterns Committee. Comprehensive adult medical eye evaluation. San Francisco (CA): American Academy of Ophthalmology (AAO); 2005. 15 p. (Preferred practice pattern). [76 references]

GUIDELINE STATUS

This is the current release of the guideline.

This guideline updates a previous version: American Academy of Ophthalmology (AAO). Comprehensive adult medical eye evaluation. San Francisco (CA): American Academy of Ophthalmology (AAO); 2000 Sep. 18 p.

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COMPLETE SUMMARY CONTENT

SCOPE

DISEASE/CONDITION(S)

Ocular abnormalities and disease including blindness, cataract, glaucoma, errors of refraction, diabetic retinopathy, macular degeneration, and peripheral retinal breaks and degeneration

GUIDELINE CATEGORY

Diagnosis
Evaluation
Prevention
Screening

CLINICAL SPECIALTY

Ophthalmology

INTENDED USERS

Health Plans
Physicians

GUIDELINE OBJECTIVE(S)

To detect and diagnose vision-, health- or life-threatening disease, and to initiate a plan of treatment (as necessary) by addressing the following goals:

- Detect and diagnose ocular abnormalities and diseases.
- Identify risk factors for ocular disease.
- Identify risk factors for systemic disease based on ocular findings.
- Establish the presence or absence of ocular signs or symptoms of systemic disease.
- Determine the refractive and health status of the eye, visual system, and related structures.
- Discuss the results and implications of the examination with the patient.
- Initiate an appropriate management plan (e.g., determine frequency of future visits, further diagnostic tests, referral, or treatment as indicated).

TARGET POPULATION

Adults seen for a comprehensive medical eye evaluation for the first time or after an extended period of time or seen for periodic evaluation of previously identified conditions or risk factors or new symptoms

INTERVENTIONS AND PRACTICES CONSIDERED

Comprehensive ophthalmologic evaluation, including history and examination

MAJOR OUTCOMES CONSIDERED

- Visual function
- Social and psychological dimensions of quality of life, mobility, and physical function

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

In the process of revising this document, a detailed literature search of MEDLINE for articles in the English language was conducted on the subject of comprehensive adult medical eye evaluation for the years 2000 to February 2005.

NUMBER OF SOURCE DOCUMENTS

Not stated

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Weighting According to a Rating Scheme (Scheme Given)

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Ratings of Strength of Evidence:

- Level I provides strong evidence in support of the statement. The design of the study allowed the issue to be addressed, and the study was performed in the population of interest, executed in such a manner as to produce accurate and reliable data, and analyzed using appropriate statistical methods. The study produced either statistically significant results or showed no difference in results despite a design specified to have high statistical power and/or narrow confidence limits on the parameters of interest.
- Level II provides substantial evidence in support of the statement. Although the study has many of the attributes of one that provides Level I support, it lacks one or more of the components of Level I.
- Level III provides a consensus of expert opinion in the absence of evidence that meets Levels I and II.

METHODS USED TO ANALYZE THE EVIDENCE

Systematic Review

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Not stated

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Expert Consensus

DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS

The results of a literature search on the subject of comprehensive adult medical eye examination were reviewed by the Preferred Practice Panel and used to prepare the recommendations, which they rated in two ways. The panel first rated each recommendation according to its importance to the care process. This "importance to the care process" rating represents care that the panel thought would improve the quality of the patient's care in a meaningful way. The panel also rated each recommendation on the strength of evidence in the available literature to support the recommendation made.

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Ratings of Importance to the Care Process

Level A, most important
Level B, moderately important
Level C, relevant, but not critical

COST ANALYSIS

Regular examination and follow-up of all diabetic patients, with laser surgery for those who require it, have been shown to be extremely cost-effective. Such monitoring and treatment are less expensive than disability payments for those who would otherwise become blind.

METHOD OF GUIDELINE VALIDATION

Internal Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

These guidelines were reviewed by Council and approved by the Board of Trustees of the American Academy of Ophthalmology (September 2005).

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

Ratings of importance to the care process (A-C) and ratings of strength of evidence (I-III) are defined at the end of the "Major Recommendations" field.

History

In general, a thorough history may include the following items, although the exact composition varies with the patient's particular problems and needs.

- Demographic data [A:III] (e.g., name, date of birth, gender and where appropriate, ethnicity or race)

- The identity of the patient's other pertinent health care providers [A:III]
- Chief complaint and history of present illness [A:III]
- Present status of visual function [A:III] (e.g., patient's self-assessment of visual status, visual needs, any recent or current ocular symptoms, and use of eyeglasses or contact lenses)
- Ocular history [A:III] (e.g., prior eye disease, injuries, surgery, including refractive surgery, or other treatments and medications)
- Systemic history: pertinent medical conditions and previous surgery [A:III]
- Medications: ophthalmic and systemic medications currently used, including nutritional supplements [A:III]
- Allergies or adverse reactions to medications [A:III]
- Family history: pertinent familial ocular and systemic disease [A:III]
- Social history [B:III] (e.g., occupation, smoking history, alcohol use, family and living situation as appropriate)
- Directed review of systems [B:III]

Examination

The comprehensive eye examination consists of an evaluation of the physiologic function and the anatomic status of the eye, visual system, and its related structures. This usually includes the following elements:

- Visual acuity with current correction (the power of the present correction recorded) at distance and when appropriate at near [A:III]
- Measurement of best corrected visual acuity (with refraction when indicated) [A:III]
- External examination [A:III] (e.g., lids, lashes, and lacrimal apparatus; orbit; and pertinent facial features)
- Ocular alignment and motility [A:III]
- Pupillary function [A:III]
- Visual fields by confrontation [A:III]
- Slit-lamp biomicroscopic examination: eyelid margins and lashes, tear film, conjunctiva, sclera, cornea, anterior chamber, and assessment of peripheral anterior chamber depth, iris, lens, and anterior vitreous [A:III]
- Intraocular pressure measurement preferably with a contact application method (typically a Goldmann tonometer) [A:III]
- Examination of the fundus: vitreous, retina (including posterior pole and periphery), vasculature and optic nerve [A:III]
- Assessment of relevant aspects of patient's mental and physical status [B:III]

Examination of anterior segment structures routinely involves gross and biomicroscopic evaluation prior to and after dilation. Evaluation of structures situated posterior to the iris requires a dilated pupil. [A:III] Optimal examination of the peripheral retina requires the use of the indirect ophthalmoscope or slit-lamp fundus biomicroscopy. [A:III] Optimal examination of the macula and optic nerve requires the use of the slit-lamp biomicroscope and accessory diagnostic lenses. [A:III]

Diagnosis and Management

The ophthalmologist evaluates and integrates the findings of the comprehensive ophthalmologic examination with all aspects of the patient's health status and

social situation in determining an appropriate course of action. Patients are considered in one of three general categories based on the results of the evaluation: patients with no risk factors, patients with risk factors, and patients with conditions that require intervention.

Category I: Patients with No Risk Factors

- When the initial comprehensive evaluation is normal or involves only optical abnormalities that require spectacle correction, the ophthalmologist reviews the findings with the patient and advises him/her of the appropriate interval for re-examination. [A:III]
- In the absence of symptoms or other indications following the initial comprehensive medical eye evaluation, periodic evaluations are recommended at the frequency indicated in Table 2 in the original guideline document, which takes into account the relationship between age and the risk of asymptomatic or undiagnosed disease. [A:III]
- Interim evaluations, such as screenings, refractions, or less extensive evaluations, are indicated to address episodic minor problems and complaints or for patient reassurance. [A:III]

Category II: Patients with Risk Factors

- The ophthalmologist determines an appropriate follow-up interval for each patient based on signs or risk factors, the incidence of disease, and rapidity of progression. [A:III] For example, individuals of African descent require more frequent examinations because they are at higher risk for an earlier onset, higher incidence, and more rapid progression of glaucoma. It is recommended that patients with the conditions and risk factors noted in Table 3 in the original guideline document undergo a comprehensive medical eye evaluation at the listed intervals. [A:III]

Category III: Conditions that Require Interventions

- The response of the ophthalmologist to patients that require intervention depends on the nature of the abnormal findings. For a patient with ophthalmic abnormalities, the ophthalmologist prescribes glasses, contact lenses, or other optical devices; treats with medications; arranges for additional evaluation, testing, and follow-up as appropriate; and performs nonsurgical procedures or surgical procedures including laser surgery when indicated. For a patient with non-ophthalmic abnormalities, the ophthalmologist will arrange for further evaluation or referral, as appropriate.
- The ophthalmologist must discuss with the patient the importance of the findings and the need for further evaluation, testing, or treatment. [A:III] The findings should be shared with the patient's primary care physician or other specialists, as appropriate. [A:III]

Definitions:

Ratings of Importance to Care Process:

Level A, most important
Level B, moderately important
Level C, relevant, but not critical

Ratings of Strength of Evidence:

- Level I provides strong evidence in support of the statement. The design of the study allowed the issue to be addressed, and the study was performed in the population of interest, executed in such a manner as to produce accurate and reliable data, and analyzed using appropriate statistical methods. The study produced either statistically significant results or showed no difference in results despite a design specified to have high statistical power and/or narrow confidence limits on the parameters of interest.
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CLINICAL ALGORITHM(S)

None provided

EVIDENCE SUPPORTING THE RECOMMENDATIONS

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of supporting evidence is identified and graded for most recommendations (see "Major Recommendations" field).

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

- Early detection and treatment of ocular disease that is prevalent in the adult population resulting in preservation of visual function
- Preserving eyesight through effective eye care and treatment of ocular disease enhances quality of life and improves physical functioning.

POTENTIAL HARMS

Not stated

QUALIFYING STATEMENTS

QUALIFYING STATEMENTS

- Preferred Practice Patterns provide guidance for the pattern of practice, not for the care of a particular individual. While they should generally meet the

needs of most patients, they cannot possibly best meet the needs of all patients. Adherence to these Preferred Practice Patterns will certainly not ensure a successful outcome in every situation. These guidelines should not be deemed inclusive of all proper methods of care or exclusive of other methods of care reasonably directed at obtaining the best results. It may be necessary to approach different patients' needs in different ways. The physician must make the ultimate judgment about the propriety of the care of a particular patient in light of all of the circumstances presented by that patient. The American Academy of Ophthalmology is available to assist members in resolving ethical dilemmas that arise in the course of ophthalmic practice.

- Preferred Practice Patterns are not medical standards to be adhered to in all individual situations. The Academy specifically disclaims any and all liability for injury or other damages of any kind, from negligence or otherwise, for any and all claims that may arise out of the use of any recommendations or other information contained herein.

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

An implementation strategy was not provided.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Living with Illness
Staying Healthy

IOM DOMAIN

Effectiveness
Patient-centeredness

IDENTIFYING INFORMATION AND AVAILABILITY

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ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

2000 Sep (revised 2005)

GUIDELINE DEVELOPER(S)

American Academy of Ophthalmology - Medical Specialty Society

SOURCE(S) OF FUNDING

American Academy of Ophthalmology (AAO)

GUIDELINE COMMITTEE

Preferred Practice Patterns Committee

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

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FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

The authors have no financial interest in the equipment, process, or product presented or competing equipment, process, or product presented.

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GUIDELINE AVAILABILITY

Electronic copies: Available from the American Academy of Ophthalmology (AAO) Web site.

Print copies: Available from American Academy of Ophthalmology, P.O. Box 7424, San Francisco, CA 94120-7424; telephone, (415) 561-8540.

AVAILABILITY OF COMPANION DOCUMENTS

None available

PATIENT RESOURCES

None available

NGC STATUS

This summary was completed by ECRI on June 30, 1998. The information was verified by the guideline developer on December 1, 1998. The summary was updated by ECRI on January 29, 2001. The updated information was verified by the guideline developer on March 12, 2001. This NGC summary was updated by ECRI on January 6, 2006. The updated information was verified by the guideline developer on February 9, 2006.

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